

# THE FIRST RECORD OF *EUPLOEA MODESTA LUGENS* BUTLER (LEPIDOPTERA: NYMPHALIDAE: DANAINAE) FROM AUSTRALIA

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## Abstract

*Euploea modesta lugens* Butler is recorded from Murray Island in Torres Strait, Queensland and is the first record of *Euploea modesta* Butler from Australia. A previous record from Thursday Island is actually of *Euploea crameri crameri* Lucas. This record is considered erroneous as the nearest known locality for *E. crameri* Lucas is approximately 3700 kilometres to the west of Thursday Island, casting doubt over the reliability of the label data for other Elgner butterfly records for the period he was operating out of Thursday Island.

## Introduction

*Euploea modesta* Butler occurs widely from Burma and Hainan to Sumatra, Java and Borneo and throughout the Lesser Sunda Islands to Alor and Wetar. It is apparently absent from the Moluccas but occurs in Biak, Papua New Guinea, the Admiralty Islands, the Bismarck Archipelago and Goodenough Island (Ackery and Vane-Wright 1984). In Papua New Guinea, *E. modesta* is sporadic in its overall distribution. It is rare generally but may be occasional locally and is represented by seven subspecies: *E. m. lugens* Butler, *E. m. misagenes* Fruhstorfer, *E. m. insulicola* Strand, *E. m. werneri* Fruhstorfer, *E. m. jennessi* Carpenter, *E. m. cerberus* Butler and *E. m. griseitincta* Carpenter (Parsons 1998). *E. m. lugens* occurs on mainland Papua New Guinea, where it is apparently restricted to the hinterlands of Port Moresby in Central Province, with the other six subspecies recorded from islands to the north and east of the mainland (Parsons 1998, Carpenter 1953).

Waterhouse and Lyell (1914) first described a male specimen of *E. alcaethoe monilifera* (Moore), under the name *E. alectro* Butler, from Thursday Island and noted that it had well developed white subapical dots both above and beneath the forewing distinguishing it from the other known male from Cape York. Waterhouse (1932) and Common and Waterhouse (1972, 1981) continued to assign this specimen to *E. alcaethoe monilifera*. De Baar (1988) reported that the specimen was in fact the only record of *E. modesta* from Australia known so far. De Baar (1988) based his assessment on the absence of a dark greyish speculum on the upperside of the hindwing and the species known from neighbouring areas of Papua New Guinea (M. De Baar, pers. comm.). Dunn and Dunn (1991) tentatively assigned the record to subspecies *E. m. lugens*; however, they noted that the specimen from Thursday Island had not been examined. One can only assume that Dunn and Dunn (1991) assigned this record to *E. m. lugens* based on the geographical proximity of Thursday Island to Port Moresby. Braby (2000) also made note of the

Thursday Island specimen; however, he noted that further information was required in order to establish whether *E. modesta* really occurs in Australia.

On 9 April 2001, a single male *E. modesta* (Figs 2, 3) was captured on Murray Island, flying around *Lantana* sp. (Verbenaceae) growing on the verges of rainforest. The butterfly was sympatric with *E. algea amycus* Miskin and *Euploea batesii resarta* Butler and superficially resembled the white-spotted male *E. algea* phenotypes encountered on the island.

## Discussion

Males of *E. m. lugens* are very similar to males of *E. core corinna* (W.S. Macleay) and the white-spotted phenotype of *E. algea amycus* Miskin but can principally be separated by the absence of the upperside forewing sex-brand (Ackery and Vane-Wright 1984, Parsons 1998). The male also lacks the distinctive purple sheen that is present on the upperside forewing of *E. algea* males, being more chocolate brown in colour. Females of *E. m. lugens* are similar to the males but their inner forewing margins are straight and they are very difficult to separate from females of *E. algea* (Parsons 1998).

The male from Murray Island (Figs 2-3) closely resembles the phenotypes of *E. m. lugens* illustrated by Ackery and Vane-Wright (1984, p. 380, pl. 44, fig. 254) and Parsons (1998, pl. 78, figs 2340-2341). The Murray Island specimen also fits within the range of variation of the specimens of *E. m. lugens* from Papua New Guinea held in the Australian Museum (D. Britton and J. Weiner, pers. comm.). The Murray Island specimen is therefore referred to *E. m. lugens* and represents a possible range extension of approximately 350 kilometres to the west of Port Moresby for this subspecies.

Parsons (1998) described *E. modesta* as being regionally variable and part of a mimicry complex with *E. alcatheae diadema* (Moore) and *E. algea violetta* (Butler) in the Port Moresby region. Parsons (1998) noted that in this area *E. algea* and *E. modesta* are so similar that the only obvious external difference between their males is the absence of the upperside forewing sex-brand in *E. modesta*. The same mimicry complex apparently occurs on Murray Island between *E. algea amycus* and *E. m. lugens*.

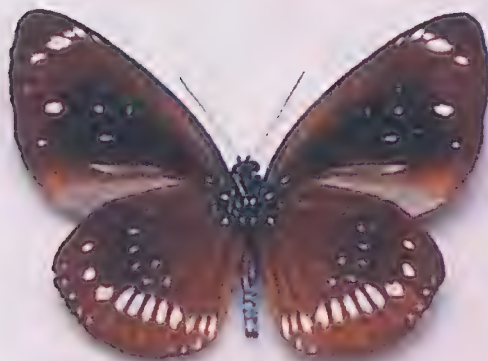
The adult specimen of *E. modesta* from Thursday Island referred to in the literature is illustrated for the first time in Fig. 1. It was apparently collected by H. Elgner in the early 1900s. At the time Elgner was collecting in the Indonesian area as well as in Torres Strait (T.A. Lambkin, pers. comm.). The specimen has an identification label by H. Hacker inscribed '*Euploea alecto monilifera* Moore 1883' (M. De Baar, pers. comm.). It has recently been reset and has been confirmed as *E. cramerii cramerii* Lucas after comparison with other available material (M. De Baar, pers. comm.). *E. cramerii* is very similar to *E. modesta* but males can be distinguished by a dark streak in the posterior half of cell Cu<sub>1b</sub> on the underside of the forewing (Ackery and Vane-Wright 1984). It is understandable that *E. cramerii* has never been



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2



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**Figs 1-3.** *Euploea* spp. (1) *E. crameri crameri* Lucas from ? Thursday Island; (2-3) *E. modesta lugens* Butler from Murray Island: (2) upperside; (3) underside.

considered as a possible candidate for the Thursday Island specimen in the past, as *E. crameri* has only been recorded from the Bay of Bengal, Burma and the Malay Peninsula to Sumatra, Borneo, Java and Bali, some 3700 kilometres to the west of Thursday Island (Ackery and Vane-Wright 1984). It is considered highly unlikely that this specimen was blown in.

Confirmation that the Thursday Island specimen is *E. crameri crameri* must therefore place in doubt the reliability of the label data for other H. Elgner butterfly records from the period and may help to explain why other Elgner butterfly records of 1910 from the islands of Torres Strait, such as *Tagiades nestus* (C. Felder), *Eurema blanda* (Boisduval), *Taenaris catops* (Westwood) (two females), and *Melanitis amabilis* (Boisduval) have not been encountered since, despite extensive collecting throughout the islands.

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